Moody's ANALYTICS

March 2014

Housing Finance Reform Steps Forward

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Abstract

Housing finance reform took a big step forward with the recent release of the Housing Finance Reform and Taxpayer Protection Act of 2014. The legislation sponsored by Senators Tim Johnson (D-SD) and Mike Crapo (R-ID) represents a serious bipartisan plan to wind down Fannie Mae and Freddie Mac and fix the nation's dysfunctional housing finance system.[1]

Housing Finance Reform Steps Forward

BY MARK ZANDI AND CRISTIAN DERITIS

Housing finance reform took a big step forward with the recent release of the Housing Finance Reform and Taxpayer Protection Act of 2014. The legislation sponsored by Senators Tim Johnson (D-SD) and Mike Crapo (R-ID) represents a serious bipartisan plan to wind down Fannie Mae and Freddie Mac and fix the nation's dysfunctional housing finance system.[1]

The Johnson-Crapo bill would allow for an explicit government backstop of the U.S. mortgage market, which would kick in only after a financial catastrophe much worse than the Great Recession (see "Key Provisions of Johnson-Crapo Bill" below). A significant amount of private capital would take the risk ahead of taxpayers.

With the government's role made clear, private mortgage lenders would be able to continue offering 30-year fixed-rate mortgages to a broad range of creditworthy American households. These popular home loans would be available at reasonable rates in both good times and bad. Without the government backstop, 30-year fixed-rate mortgages would essentially disappear, becoming as rare in the U.S. as they are in the rest of the world.[2]

To reduce the cost of mortgage credit and to ensure that credit is available at all times, the legislation promotes the use of private capital from a wide range of sources. Bond guarantors, private mortgage insurers, reinsurers, and the capital markets could provide capital. The only requirement is that combined they provide the required amount of capital to protect taxpayers. The legislation also works to provide a level playing field across sources of capital.

The legislation encourages competition, standardization and transparency to keep costs down. Key to this is the development of a common securitization platform that would operate as a cooperative, easing the entry of new bond guarantors into the system. The platform would establish standards for guaranteed mortgage securities that would greatly simplify the securitization process.

To make sure everyone plays by the rules and to protect taxpayers, a new independent government agency, the Federal Mortgage Insurance Corp., would oversee the housing finance system. The FMIC would resemble the Federal Deposit Insurance Corp., which insures bank deposits. As the founding of the FDIC ended the cataclysmic bank runs of the 1930s, the new agency would prevent similar runs on the mortgage market.

The legislation deals constructively with other contentious issues in housing finance. It would give small lenders such as community banks and credit unions access to the secondary mortgage market without having to go through big financial institutions, which could use their size to their advantage.[3] Small lenders would continue to be able to readily sell their mortgage loans for cash.

The legislation would also replace Fannie and Freddie's ineffective affordable housing rules, with explicit and targeted funds to promote affordability and homeownership. In addition, the multifamily mortgage market would receive a catastrophic government backstop in the legislation, which, as the financial crisis showed, is especially critical to the flow of credit to low-income rental properties during bad times.

The Johnson-Crapo bill is also sensitive to transition concerns: that is, how to get from the current to the future one without disruptions. This is critical given how important the U.S. housing and mortgage markets are to the U.S. economy and global financial system. The legislation sets a five-year transition period, but there are provisions to extend this using various benchmarks. There is also a phase-in period for new guarantors to be fully capitalized to FMIC standards. This will help address worries that there will not be enough private capital to support the new housing finance system.[4]

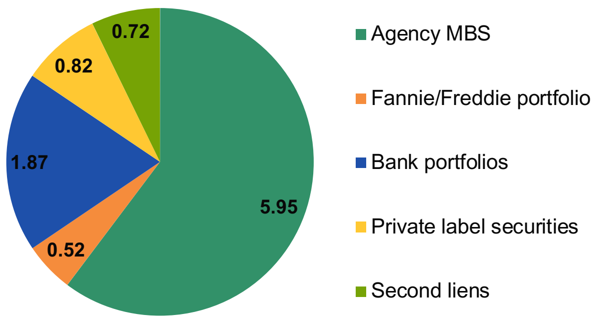
Winding down Fannie and Freddie

It is time to wind down Fannie and Freddie and reform the housing finance system. Since the government took over the two giant mortgage finance companies during the financial collapse more than five years ago, nothing has changed. The government is still making nearly nine of every 10 U.S. mortgage loans, amounting to almost $1 trillion annually.[5] And taxpayers are exposed to the credit risk on two-thirds of the almost $10 trillion in mortgage debt outstanding (see Chart 1).

This is bad for taxpayers and homebuyers and is not necessary: Private investors are willing to take on much of this risk and, with some safeguards, are capable of doing it. Private capital has poured into the private mortgage insurance industry over the past year, and risk-sharing efforts by Fannie and Freddie with investors have been very successful. With so much private capital

Chart 1: Government Is on the Hook for a Lot of Risk

Mortgage debt outstanding, $ tril



Sources: Federal Reserve, Moody's Analytics

interested in participating in the mortgage market, it is an especially propitious time for housing finance reform.

The longer Fannie and Freddie stay in government hands, the more lawmakers will be tempted to use them for purposes unrelated to housing. This has already happened. The 2012 payroll tax holiday was partially paid for by raising the premiums Fannie and Freddie charge homebuyers for providing insurance. Mortgage borrowers will be paying extra as a result over the next decade.

The housing market's revival has allowed Fannie and Freddie to again turn large profits, amounting to tens of billions of dollars each year. Policymakers may begin to rely on these profits to fund future government spending, making it especially hard to let Fannie and Freddie go.[6]

Fannie and Freddie's limbo status has fostered indecision at the two institutions and their regulator, the Federal Housing Finance Agency. Lenders who do business with Fannie and Freddie are unsure of the rules and are thus being extra cautious, keeping credit overly tight for potential homebuyers. This can be seen in the average credit scores on loans acquired by Fannie and Freddie, which today are in the top one-third of all credit scores.

Longer run, given the nation's changing demographics, the concern should be that Fannie and Freddie under government auspices will not make the innovations needed to extend loans to all creditworthy borrowers.

Politicians may also eventually be tempted to force Fannie and Freddie to lend to people who really cannot afford mortgages. Helping disadvantaged but creditworthy households become homeowners is laudable, but experience shows that politically driven help can be misdirected or abused.

Doing nothing and punting on housing finance system reform means that taxpayers will ultimately bear the cost of mortgage credit risk, and not mortgage borrowers. This is not efficient, nor is it appropriate.

Mortgage rate impact

Capitalizing the housing finance system to withstand a 10% loss is not necessary. The odds of losses this large are extremely remote—combined Fannie, Freddie, and private mortgage insurers lost less than half that much in the housing crash and Great Recession. Yet a 10% loss level of capitalization still has some significant benefits.[7] It would provide a fortress financial foundation, all but eliminating taxpayers' exposure to risk, and should allay any concern about the government charging too little for its guarantee. Under most circumstances the government's guarantee fee should be very small.

A high capitalization level should also dispel any moral hazard concerns that private financial institutions would lower their underwriting standards and take on too much risk, assuming the government would bail them out. It is hard to conceive that this would be a problem in the Johnson-Crapo housing finance system since private capital would have so much skin in the game. Before the government guarantee would ever have been needed, private investors would have suffered devastating losses.

The principal cost of requiring a 10% capitalization is a higher mortgage rate for borrowers. How much higher depends on many factors, but it probably would add less than a half percentage point to the average mortgage rate, or about $75 a month in extra interest payments. This represents a roughly 10% increase for the typical new mortgage borrower. While meaningful, it is worth the price if it funds a rock-solid and accessible mortgage and housing market for generations.

Cost of capital

Limiting the mortgage-rate impact of the 10% capitalization in the Johnson-Crapo bill is the flexibility the legislation gives the FMIC. Although capital can be provided either by the capital markets or by bond guarantors, this analysis assumes that guarantors provide the first-loss capital and share the risk with capital markets.

The guarantors have two capital requirements. First, they must maintain sufficient equity to remain solvent in a stress test.[8] The FMIC will determine the appropriate stress scenario, but assuming they use a scenario similar to the severely adverse scenario in the Federal Reserve's Comprehensive Capital Analysis and Review for the nation's large banks, the guarantors will need to hold approximately 4% equity capital.[9] It is likely no coincidence that this is approximately equal to the combined losses suffered by Fannie, Freddie, and private mortgage insurers during the housing crash and Great Recession. It is also approximately equivalent to the amount of capital banks must hold against the mortgages they own under the Basel III capital standards.

Second, guarantors must maintain a capital ratio of 10%, although the FMIC has substantial discretion over what can be included in the numerator and denominator of the ratio. Capital in the numerator is broadly defined to include "instruments and contracts that will absorb losses before the Mortgage Insurance Fund."[10] Examples of such instruments and contracts include reinsurance, letters of credit, and future guarantee fees to be earned by the guarantor after accounting for the stress scenario. The denominator of the capital ratio could include total assets, total liabilities, risk-in-force, or unpaid principal balance.[11]

Key Provisions of Johnson-Crapo Bill

The Johnson-Crapo Housing Finance Reform and Taxpayer Protection Act of 2014 has six principal provisions:

Private securitization

Johnson-Crapo requires private financial institutions put up 10% in first-loss capital to qualify for a government guarantee. The Corker-Warner plan also required a 10% private capital buffer, but Johnson-Crapo gives regulators more latitude to determine how the capital buffer is met. Capital markets and mortgage guarantors would provide capital with the stipulation that their loss-absorbing capacity is equivalent.

Creation of FMIC

Johnson-Crapo creates a new regulator, the Federal Mortgage Insurance Corp., to oversee the process of insuring, securitizing and servicing mortgages and to provide an explicit government backstop for certain mortgage-backed securities.

As a regulator, the FMIC would replace the FHFA, Fannie and Freddie's current regulator, and oversee all aspects of the mortgage finance market including the approval of loan originators and servicers. The agency would set securitization standards and underwriting requirements for any loans that end up in securities backed by the government. At a minimum, loans would have to meet the standards for a qualified mortgage set up by the Consumer Financial Protection Bureau. Under the legislation, the FMIC's underwriting standards would include a down payment requirement of 3.5% for first-time homebuyers and 5% for other buyers.

As a guarantor of mortgage default, the FMIC would insure approved mortgage-backed securities through the creation of a Mortgage Insurance Fund analogous to the FDIC's Deposit Insurance Fund. The MIF would protect investors' losses beyond a 10% first-loss position held by private participants in the market. The MIF would initially be capitalized through assessments charged to Fannie and Freddie, but later that cost would be shifted to private market participants as Fannie and Freddie are wound down. MIF's reserves would start out at 1.25% of the unpaid principal balance on covered securities with the reserve ratio rising to 2.5% as the fund matures.

Organizationally, the FMIC would be structured similar to the FDIC with a five-member board of directors nominated by the president and confirmed by the Senate.

Fannie, Freddie wind-down

Johnson-Crapo would wind down Fannie and Freddie and significantly reduce the government's role in the housing market. The legislation targets a five-year wind-down of the GSEs, but there are provisions to extend this depending on the achievement of various benchmarks. The implementation of a new securitization platform is a vital benchmark, as is the establishment of a sufficient number of private guarantors, aggregators, private mortgage insurers, and multifamily guarantors.

Given the complexities and sheer size of the mortgage market and GSE portfolios, the five-year time frame is unlikely: A 10-year horizon seems more plausible. The FHFA has had difficulty getting its common securitization platform project off the ground. Coordinating the thousands of players in the secondary mortgage market and ensuring that processes are working smoothly will take time. Given how integrated the agency MBS market is with global financial markets, even the slightest hiccup in the process once it begins could have significant consequences.

Common securitization platform

The legislation calls for the establishment of a universal standard for the MBS guaranteed by the FMIC. This standard would simplify the securitization process and make it easier for investors to compare MBS pools. Standardization would be flexible enough to accommodate a variety of products but with an emphasis on preserving the liquidity of the 30-year, fixed-rate mortgage.

The new securitization platform would operate as a cooperative owned by its members and regulated by the FMIC. The FMIC would select a five-member board to get the platform up and running. Subsequent boards would consist of nine elected directors representing members of the platform. To address concerns of smaller mortgage lenders, the bill specifies that at least one of the directors must represent the interests of small mortgage lenders. One director must be independent, with an eye toward ensuring that the platform meets the public interest.

Affordable housing

The bill removes the explicit housing goals now required for the GSEs and creates a number of funds to address the issue of affordable housing and homeownership. A criticism of the GSE structure is that its mandate to maintain mortgage liquidity throughout the business cycle could conflict with its affordable housing mandate.

To avoid these conflicts in the future, the bill creates the Housing Trust Fund with a mandate to ensure that quality housing is ample. In addition, the bill creates a Market Access Fund to oversee the creation of responsible lending products for underserved communities. Both of these programs would be funded by a 10-basis point surcharge on subscribers to FMIC insurance.

To address concerns of consumer advocates and mortgage brokers, the Johnson-Crapo bill preserves the ability of consumers to lock in interest rates before closing on home purchases, and ensures that 30-year fixed-rate mortgages will be available in the future.

Small lenders

The legislation would establish a mutually owned cooperative of small lenders to ensure that community banks and credit unions have access to the secondary mortgage market. The cooperative would provide members with access to the secondary mortgage market through a cash window as well as securitization services.

However, the rules for the cooperative would allow banks with up to $500 billion in assets to be members, while nonbank mortgage lenders would have to meet a $2.5 million net worth test. Federal Home Loan Banks could be members as well. The cooperative would receive some of Fannie and Freddie's existing securitization technology to allow it to better compete with other large securitization firms.

Given that the guarantors must maintain equity of 4% to pass the solvency test, they can satisfy the required 10% capital ratio by holding 6% in instruments and contracts that protect the MIF against loss.

The cost of providing this capital thus depends on the FMIC's interpretation of the legislation. Under a liberal but reasonable interpretation, in which a guarantor holds 4% in common and preferred equity, risk-shares with capital markets to provide 3% of loss absorbing capacity, and uses future guarantee fees for the remaining 3%, the cost would currently be 69 basis points (see Table 1). That is, given current interest rates and assumed return requirements, the guarantor would have to charge mortgage borrowers 69 basis points to cover their cost of capital.

Table 1: Cost of Capital In Johnson-Crapo

Assumptions

After-tax cost of common equity	12%
After-tax cost of preferred equity	7%
Cost of debt or risk syndication (basis-point spread over Treasury)	300
Pre-tax return on unlevered capital	2%
Tax rate	37%

	Capitalization	Cost of Capital Bps
Johnson-Crapo (Liberal Interpretation)	10%	69
Common equity	3%	57
Preferred equity	1%	11
Debt or risk syndication	3%	9
Present value of future G-fees	3%	0
Less: Return on cash reserves to pay for losses		-8
Johnson-Crapo (Strict Interpretation)	10%	86
Common equity	4%	76
Preferred equity	0%	0
Debt or risk syndication	6%	18
Present value of future G-fees	0%	0
Less: Return on cash reserves to pay for losses		-8
Bank Portfolio Under Basel III	5%	77
Common equity	4%	76
Preferred equity	1%	11
Debt or risk syndication	0%	0
Present value of future G-fees	0%	0
Less: Return on cash reserves to pay for losses		-10

Note:

These cost of capital estimates are for the typical 30-year fixed-rate mortgage borrower with an 80% loan-to-value ratio and 750 credit score.

Source: Moody's Analytics

For reference, under a stricter interpretation of the capital rules by the FMIC, in which guarantors are required to have 4% common equity and are not permitted to use future g-fees in their capital calculation, the guarantor's cost of capital would be 86 basis points.

Return assumptions

An important assumption is that the after-tax required return on equity capital will be 12%. This would be consistent with large money center banks, which currently have a 10% return on equity, and private mortgage insurers, whose after-tax ROE is closer to 15%.

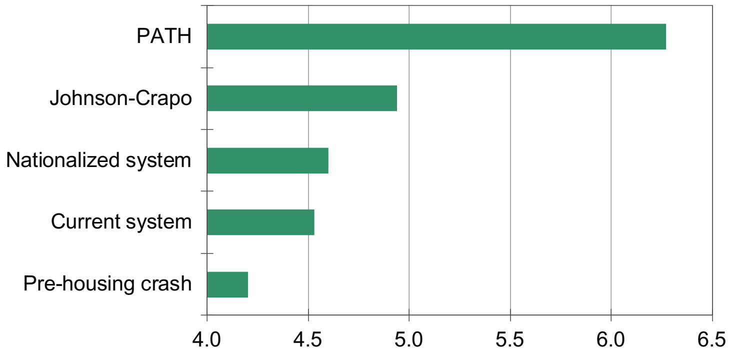
More uncertain is the interest rate spread over Treasuries that investors will require for the risk-sharing instruments issued by the guarantors. The 300-basis point spread assumed in the analysis compares with an average historical spread between yields on Fannie Mae securities and Treasuries of just over 100 basis points, a 250-basis point spread on Baa corporate bonds (lowest, investment grade), and a 500-basis point spread on below-investment grade corporate bonds.

The spread that will attract investors to the new mortgage credit bonds under the Johnson-Crapo rules will depend on many factors, including: how much data will be made available to investors to assess the risk; whether some average market risk is sold or whether the risk is sold bond by bond; the consistency and approach to origination standards and representations and warranties; and even the strength of the underlying issuer if the ultimate credit performance of the bond is affected by the repurchase of individual mortgages found to have been underwritten improperly.

There will likely be an adjustment period with higher spreads until it is clear how the reforms are working out and that the liquid-

Chart 2: Mortgage Rates Under Housing Finance Reform

Current mortgage rate, %



Source: Moody's Analytics

ity for these bonds is fully established. The guarantors need to be sufficiently capitalized, and the capital markets need to be open so that the security can be placed. These factors are co-dependent: It is difficult for the guarantor to price for risk that the securities markets will price appropriately, and vice versa.

Half a percentage point

Johnson-Crapo's impact on mortgage rates goes beyond the guarantors' cost of capital. There is the 10-basis point charge to fund the Market Access Fund and an assumed 10-basis point charge to pay for the government catastrophic backstop.[12] Partially offsetting these higher fees will be the lower yield on government guaranteed mortgage securities. The explicit government guarantee should reduce the yield relative to that on current Fannie Mae securities by 15 basis points. The yield should be a bit lower than Ginnie Mae securities, which also receive the full backing of the government, given the assumed liquidity benefits provided by the common securitization platform and single security

Other aspects of the Johnson-Crapo bill cut in different directions for mortgage rates. There is a possibility that despite efforts to promote entry and competition among guarantors, two or three large institutions will ultimately dominate the market and become systemically important. There are provisions in the legislation to establish "supplemental capital requirements" and even to limit the market share of too-big-to-fail institutions, but these would increase costs and thus mortgage rates.[13]

The common securitization platform could lower costs more than anticipated through increased standardization, better quality data, and the issuance of a single security. On net, these and other factors appear to be a wash on mortgage rates, although this is a conservative assumption, and if mortgage rates under Johnson-Crapo vary from levels determined by this analysis the odds favor them being lower rather than higher.

The current interest rate on a 30-year fixed-rate loan for a mortgage borrower with a 750 credit score and a 20% down payment is close to 4.5%. Under Johnson-Crapo, using a liberal but reasonable interpretation of the capital rules, the mortgage rate for the same borrower would be closer to 4.9%, some 40 basis points higher (see Table 2). Even if the FMIC takes a somewhat tougher stance on the capital rules, mortgage rates in Johnson-Crapo will be no more than half a percentage point higher than they are today.

For context, under a nationalized housing finance system, in which Fannie and Freddie are permanently subsumed into the federal government, the current fixed mortgage rate would be 4.6%. And under the Protecting American Taxpayers and Homeowners reform legislation introduced by the House Financial Services Committee last summer, which effectively assumes a completely privatized housing finance system with no government backstop, the fixed mortgage rate would be almost 6.3% (see Chart 2).[14]

It is important to note that mortgage rates will be more variable throughout the business cycle in Johnson-Crapo than in the current system, given the more variable cost of capital coming from the capital markets. Capital markets will provide cheaper capital to the housing finance system in good times, but more costly capital in tough times. Depending on how private mortgage insurance is treated by the FMIC, this could be especially true for borrowers with smaller down payments, although still eligible for a government guarantee.

Housing impact

A 50-basis point increase in fixed mortgage rates under the Johnson-Crapo bill would have a measurable but very modest impact on the housing market. To illustrate this, the Moody's Analytics macroeconomic model was simulated under the assumption that fixed rates rise by half a percentage point at the start of this year.[15] Three years later at the peak impact, home sales are lower by approximately 250,000 units, housing starts are off by just over 100,000 units, and the homeownership rate is almost 0.1 percentage point lower (see Table 3).

Vertical integration

There is a lot to like in the Johnson-Crapo vision of the housing finance system, but it falls short in some important, yet readily fixable respects.

Significantly, the Johnson-Crapo bill allows for vertical integration in the housing finance system. That is, financial institutions are permitted to originate loans, aggregate loans, securitize them, and also guarantee them. Not even Fannie and Freddie are permitted to originate loans in the current system, given the reasonable concern this would increase their dominance over the mortgage market and exacerbate the too-big-to-fail risk they pose.

While efforts to vertically integrate may be stymied by other provisions in the legislation, such as the FMIC's ability to raise capital standards for large institutions or even limit their market share, or by other regulatory requirements, Johnson-Crapo should make a clear break between guarantors and originators: Financial institutions should be one or the other, not both.

Separating originators from guarantors would also ensure that more due diligence would be applied to the mortgage loans and

Table 2: Mortgage Rates In Different Housing Finance Systems

Basis Points

Pre-Crash GSE System	420
G-fee	20
MBS Yield	350
Servicing and Origination Compensation	50
Current System	453
G-fee	53
Cost of capital	23
Administrative costs	10
Expected loss	10
Payroll tax surcharge	10
Yield on Mortgage Securities	350
Servicing and Origination Compensation	50
Johnson-Crapo (liberal interpretation)	494
G-fee	109
Cost of capital	69
Administrative costs	10
Expected losses	10
Mortgage Insurance Fund	10
Market Access Fund	10
Yield on Mortgage Securities	335
Servicing and Origination Compensation	50
PATH	627
G-fee	142
Cost of capital	123
Administrative costs	10
Expected losses	9
Liquidity Premium on mortgage securities	10
Financial Market Risk Premium on mortgage securities	25
Cost of Funds	400
Servicing and Origination Compensation	50
Nationalized System	460
G-fee	70
Cost of capital	50
Administrative costs	10
Expected loss	10
Yield on Mortgage Securities	340
Servicing and Origination Compensation	50
Difference Between Johnson-Crapo and Current System	41
Difference Between PATH and Current System	174
Difference Between Johnson-Crapo and PATH	133

Note:

Assumes current financial market conditions and servicer/orginator margins, but that the housing finance system has worked through any transition costs.

Payroll tax g-fee surcharge expires in 2022 and is not included in the Corker Warner and PATH g-fee calculations.

These mortgage rate estimates are for the typical 30-year fixed-rate mortgage borrower with an 80% loan-to-value ratio and 750 credit score.

Source: Moody's Analytics

securities being originated. Independent guarantors would be especially careful in their underwriting given how much skin in the game they would have.

Worries about regulatory overlap between the FMIC and banking regulators would also be addressed. Under any circumstance, the FMIC would need to coordinate with the Federal Reserve, Securities and Exchange Commission, Office of the Comptroller of the Currency, Consumer Financial Protection Bureau and other agencies, but the regulatory burden would be significantly reduced if originators, who can be heavily regulated depository institutions, are not permitted to own guarantors.

Then there is the issue of the small-lender mutual. Allowing lenders with up to $500 billion in assets to join would open these alliances to more than small lenders. Limiting participation in the mutual to institutions with no more than $100 billion in assets would satisfy the needs of truly small lenders. This would also ensure that big lenders have an interest in ensuring a competitive number of viable bond guarantors.

Guarantors vs. capital markets

A further concern with Johnson-Crapo is that it allows capital markets to be in direct competition with guarantors to provide first-loss capital to the housing finance system. This seems sensible in theory, as the competition should keep costs down. But in reality this would likely be destabilizing, as guarantors could not compete with capital markets when housing and financial market conditions are good. And if guarantors cannot compete in good times, they will not be around in bad times, when the capital markets are no longer willing to provide sufficient capital.

The Johnson-Crapo bill recognizes this problem and works to preserve a balance between capital markets and guarantors. It authorizes the FMIC "to ensure equivalent loss absorption capacity between approved credit risk-sharing mechanisms (capital markets)…and capital standards for approved guarantors."[16]

This ostensibly gives guarantors an advantage. Since guarantors insure a diversified pool of mortgages over time (in good and

Table 3: Housing Market Impact of 50-Basis Point Increase in Fixed Mortgage Rates

	2014Q1	2014Q2	2014Q3	2014Q4	2015Q1	2015Q2	2015Q3	2015Q4	2016Q1	2016Q2	2016Q3	2016Q4
Home sales, ths	-84.3	-88.2	-81.8	-77.2	-81.3	-91.8	-108.3	-130.6	-159.0	-189.8	-221.8	-252.8
New-home sales	-10.9	-20.0	-15.7	-14.0	-15.2	-16.2	-17.6	-20.0	-23.3	-27.8	-32.9	-38.1
Existing-home sales	-78.8	-78.2	-74.0	-70.2	-73.7	-83.7	-99.5	-120.6	-147.4	-175.9	-205.3	-233.7
Housing starts, ths	-19.0	-31.1	-42.7	-54.2	-65.8	-76.1	-84.4	-92.0	-98.5	-103.7	-107.7	-110.0
Single-family	-14.0	-16.6	-16.4	-17.0	-20.0	-25.0	-31.6	-39.1	-46.1	-52.0	-56.5	-59.2
Multifamily	-5.0	-14.5	-26.2	-37.2	-45.9	-51.1	-52.7	-52.9	-52.4	-51.7	-51.2	-50.8
Homeownership rate, bps	-0.3	-0.9	-1.5	-1.9	-2.7	-3.5	-4.4	-5.3	-6.1	-7.1	-7.9	-8.8

Source: Moody's Analytics

bad times), they have more loss-absorbing capacity for a given capitalization than do capital markets, whose risk is likely concentrated in given vintage of mortgages. Consider that Fannie Mae's cumulative losses on its 2007 book of loans could ultimately approach 10% (far and away its worst book), but its losses on loans booked between 2000 and 2007 were less than 5%. Guarantors are also likely to be more diversified across geography and loan types.

However, capital markets have a substantial tax advantage, because interest payments on debt are tax-deductible. Since guarantors must hold at least some equity, their after-tax cost of capital is much higher. This is especially true when economic and financial market conditions are strong. Credit markets will dominate guarantors when times are good, skimming the best-performing loans. If guarantors are unable to compete in the good times, they will not be viable in the bad times. A key implication of this is that the Federal Housing Administration will likely become the principal source of credit in recessions, not a great outcome for taxpayers.

For Johnson-Crapo to work in all parts of the business cycle, it is important that guarantors provide the first-loss capital and then risk-share with the capital markets. This could change as more is learned about how guarantors and capital markets interact and the new housing finance system innovates and evolves. Regulators will need to remain vigilant and fine-tune the required ratios of capital from various sources to ensure the system remains sound throughout all phases of the business cycle.

Conclusions

The similarities of the Johnson-Crapo bill to the Corker-Warner proposal suggest that a consensus is growing in the Senate around a vision for housing finance reform. The House is more divided, with competing proposals calling for the elimination of Fannie and Freddie, but no consensus on the government's role in the future system. Given the partisan divisions and the distraction of the midterm elections, it will be difficult to pass housing finance reform legislation this year.

That would be a shame. The federal government has stepped back substantially from its extraordinary intervention in the economy prompted by the Great Recession. Fiscal stimulus has long since been replaced by fiscal austerity. The Troubled Asset Relief Program bailout fund is now history, and the Federal Reserve has begun normalizing monetary policy. That leaves Fannie and Freddie and setting up a new housing finance system as the largest piece of unfinished business.

Endnotes

1 The discussion draft of the Johnson-Crapo legislation S.1217 was released on March 16, 2014. Johnson-Crapo is largely consistent with the legislation introduced last year by Senators. Bob Corker (R-TN) and Mark Warner (D-VA). For an assessment of the Corker-Warner legislation, see "Evaluating Corker-Warner," Zandi and DeRitis, July 2013, Moody's Analytics white paper.
2 Fixed-rate mortgage loans account for close to 80% of U.S. mortgage loans outstanding. This is nearly the mirror image of most other developed economies in which fixed-rate loans are closer to 20% of loans outstanding.
3 The small lender mutual is established in section 315, beginning on page 193.
4 The authority of the FMIC to establish provisional standards is described in section 607, pages 401-403.
5 This is the estimated long-run trend level of annual mortgage originations.
6 Fannie and Freddie have almost paid back some $190 billion that taxpayers provided to them during the housing crash. The agencies have been notably profitable in the past year, due in part to temporary factors. But even in more typical times, they could collectively generate close to $20 billion in annual profits that would go into government coffers.
7 Fannie, Freddie, and private mortgage insurers are comparable to the financial institutions that would provide first-loss capital in front of the government guarantee in the Johnson-Crapo housing finance system. Mortgage losses for guarantors in Johnson-Crapo would arguably be even lower in a future downturn, similar in severity to the Great Recession given the tighter underwriting standards for mortgage loans that would receive the government guarantee in the future. Of course, in theory, the government would never again bail out the financial system, raising future costs to all financial institutions, including those providing first-loss capital to the government guaranteed mortgage market.
8 See section 311(g)(1)(B), page 140 and 311(g)(3), page 141 of the Johnson-Crapo discussion draft.
9 The Federal Reserve's CCAR process and scenarios are described at length on the Fed's web site.
10 The 10% capital ratio is stipulated in section 311(g)(1)(A), page 140 of the Johnson-Crapo draft legislation. The numerator of the ratio is defined in section 309(b)(2)(B)(i), page 126 and section 309(b)(2)(B)(ii), page 126.
11 The denominator of the capital ratio is defined in section 309(b)(2)(C), page 126.
12 It is assumed that Fannie and Freddie's profits between now and when Johnson-Crapo is implemented will be used in part to pre-fund the Mortgage Insurance Fund, limiting the government's guarantee fee for the MIF once the new housing finance system is up and running.
13 The supplemental capital requirements and market share limitations are in 309(b)(3)(D), pages 127-128.
14 The assumptions used to derive these mortgage rate estimates are available in "Cost of Housing Finance Reform," Zandi and DeRitis, November 2013, Moody's Analytics white paper. The PATH act is assessed in detail in "Evaluating PATH," Zandi and DeRitis, July 2013, Moody's Analytics white paper.
15 The assumed 50 basis point increase in mortgage rates in 2014 is for didactic purposes. The actual increase in mortgage rates will be more variable, and of course, only when the legislation is implemented, which could take more than a decade.
16 See section 310, page 133.

About the Authors

Mark Zandi

Mark M. Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of Economy.com, which Moody's purchased in 2005.

Dr. Zandi's broad research interests encompass macroeconomics, financial markets and public policy. His recent research has focused on mortgage finance reform and the determinants of mortgage foreclosure and personal bankruptcy. He has analyzed the economic impact of various tax and government spending policies and assessed the appropriate monetary policy response to bubbles in asset markets.

A trusted adviser to policymakers and an influential source of economic analysis for businesses, journalists and the public, Dr. Zandi frequently testifies before Congress on topics including the economic outlook, the nation's daunting fiscal challenges, the merits of fiscal stimulus, financial regulatory reform, and foreclosure mitigation.

Dr. Zandi conducts regular briefings on the economy for corporate boards, trade associations and policymakers at all levels. He is on the board of directors of MGIC, the nation's largest private mortgage insurance company, and The Reinvestment Fund, a large CDFI that makes investments in disadvantaged neighborhoods. He is often quoted in national and global publications and interviewed by major news media outlets, and is a frequent guest on CNBC, NPR, Meet the Press, CNN, and various other national networks and news programs.

Dr. Zandi is the author of *Paying the Price: Ending the Great Recession and Beginning a New American Century*, which provides an assessment of the monetary and fiscal policy response to the Great Recession. His other book, *Financial Shock: A 360º Look at the Subprime Mortgage Implosion, and How to Avoid the Next Financial Crisis*, is described by the New York Times as the "clearest guide" to the financial crisis.

Dr. Zandi earned his B.S. from the Wharton School at the University of Pennsylvania and his PhD at the University of Pennsylvania. He lives with his wife and three children in the suburbs of Philadelphia.

Cristian deRitis

Cristian deRitis is a director in the Credit Analytics group at Moody's Analytics, where he develops probability of default, loss given default, and loss forecasting models for firms and industries; contributes to forecasts and analysis for CreditForecast.com; and writes periodic summaries of the consumer credit industry. His commentary on housing and mortgage markets, securitization, and financial regulatory reform often appears on the Dismal Scientist web site and in the Regional Financial Review.

Dr. deRitis' recent consulting work has included an evaluation of the efficacy and cost of the federal government's Home Affordable Modification Plan, and he is frequently consulted on credit risk modeling and measurement as well as housing policy. He helped develop the company's models to forecast the Case-Shiller and FHFA metropolitan house price indexes and is a regular contributor to the firm's Housing Market Monitor. Dr. deRitis also gives frequent presentations and interviews on the state of the U.S. housing, mortgage and credit markets.

In his previous work at Fannie Mae, Dr. deRitis supervised a team of economists who developed models of borrower default and prepayment behavior. He has published research on consumer credit and credit modeling as well as on the costs and benefits of community mediation. He received a PhD in economics from Johns Hopkins University, where he focused on the impact of technology on labor markets and income inequality. His bachelor's degree in economics is from the Honors College at Michigan State University.

About Moody's Analytics
Economic & Consumer Credit Analytics

Moody's Analytics helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. Through its team of economists, Moody's Analytics is a leading independent provider of data, analysis, modeling and forecasts on national and regional economies, financial markets, and credit risk.

Moody's Analytics tracks and analyzes trends in consumer credit and spending, output and income, mortgage activity, population, central bank behavior, and prices. Our customized models, concise and timely reports, and one of the largest assembled financial, economic and demographic databases support firms and policymakers in strategic planning, product and sales forecasting, credit risk and sensitivity management, and investment research. Our customers include multinational corporations, governments at all levels, central banks and financial regulators, retailers, mutual funds, financial institutions, utilities, residential and commercial real estate firms, insurance companies, and professional investors.

Our web periodicals and special publications cover every U.S. state and metropolitan area; countries throughout Europe, Asia and the Americas; the world's major cities; and the U.S. housing market and other industries. From our offices in the U.S., the United Kingdom, the Czech Republic and Australia, we provide up-to-the-minute reporting and analysis on the world's major economies.

Moody's Analytics added Economy.com to its portfolio in 2005. Now called Economic & Consumer Credit Analytics, this arm is based in West Chester PA, a suburb of Philadelphia, with offices in London, Prague and Sydney. More information is available at www.economy.com.

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